

REMARKS

All claims stand rejected either under 35 U.S.C. §102(e) as being anticipated by, or under 35 U.S.C. §103(a) as being unpatentable over, U.S. Published Patent Application No. US 2001/0054034 A1 to Arning et al. (hereinafter "Arning"). Applicant respectfully requests that the Examiner reconsider these rejections in view of the following comments.

The present invention is directed to an object model system for multidimensional applications which is comprehensive and intuitively structured, which is minimally inflatable and is expanded in memory only to the extent that a developer or user requests, which is capable of preserving application state without wasting large amounts of the web server's resources, and which provides shortcut methods to directly generate web content. To these ends, the present invention is provided with a very precise structure and operation, as discussed in more detail below with respect to the specific claim limitations.

Arning, however, is directed to a completely different system. Arning is directed to technique for accessing a subject multi-dimensional database stored on a data store connected to the computer, in which an index is created for the subject multi-dimensional database. The index comprises another multi-

dimensional database, and the subject multi-dimensional database is accessed using the index.

While Arning and the present invention both relate to multi-dimensional databases, the goals, structure and operation of the systems are completely different. More specifically, Claims 1 and 10 of the present application (which are directed to the object model employed by the system of the present invention) both require, among other elements, (i) at least one cube object stored on each of the at least one dataserer, each of the at least one cube object comprising at least one saved view of data; and (ii) at least one dimension object stored on each of the at least one dataserer, each of the at least one dimension object comprising at least one saved subset of elements. Thus, Claims 1 and 10 of the present invention require that each dataserer have stored thereon both at least one cube object comprising at least one saved view of data and at least one dimension object comprising at least one saved subset of elements.

Arning does not disclose, teach or suggest this. Rather, Arning discloses two separate multi-dimensional databases (index multi-dimensional database 134 and subject multi-dimensional database 136). Although not explicitly stated, it appears that each of these databases 134, 136 employs a standard object model, having stored thereon two separate sets of cube objects. There is no disclosure,

teaching or suggestion that either of databases 134, 136 employs the novel object model of the present invention (i.e., where at least one of the databases has stored thereon both at least one cube object comprising at least one saved view of data and at least one dimension object comprising at least one saved subset of elements).

Moreover, it would not have been obvious for one skilled in the art to modify Arning to arrive at the present invention. Arning is concerned with solving a completely different (and unrelated) problem than is the object model aspect of the present invention. As discussed in detail in the present application, Claims 1 and 10 are directed to a novel object model, the purpose and benefit of which is to provide a much more intuitive technique from a programming perspective as compared to employing low-level API function calls. Arning, on the other hand is concerned with facilitating user (as opposed to programmer) interaction with the system. Arning is not at all concerned with providing an object model which is more intuitive from a programming perspective. In fact, Arning specifically discloses that "[t]he Index System uses standard application programming interfaces (APIs) provided with a multi-dimensional database system" (See Arning , page 7, paragraph [0092]). Thus, there is no motivation provided by Arning to use other than a "standard" object model and/or other than "standard" API function calls in connection with either of databases 134, 136.

Moreover, Claims 11, 24 and 27 of the present application (which are directed to the adaptive instantiation and inflation technique employed by the system of the present invention) all require, among other elements, object model software: (i) which instantiates and inflates specified objects up-front a first time the database is accessed, and (ii) which instantiates and inflates objects which are not specified objects on demand as the nonspecified objects are accessed. Thus, Claims 11, 24 and 27 of the present invention require a two-stage, adaptive instantiation and inflation.

Arning does not disclose, teach or suggest this. Arning does not even specifically address when instantiating and inflating of the databases is to occur. What Arning is concerned with at page 2, paragraph [0041] (i.e., the portion of Arning cited by the Examiner as disclosing the limitations of Claims 11, 24 and 27) is when mining runs are to be performed to create the index database. However, even assuming that such mining runs could be equated to instantiating and inflating (which Applicant does not believe to be appropriate), there is still no disclosure, teaching or suggestion of the two-stage, adaptive technique required by Claims 11, 24 and 27. Rather, Arning discloses that a mining run of the subject multi-dimensional database (1) may be driven by the user interface or (2) may be carried out following incremental data load (i.e., up front). However, as discussed

in detail in the present application, there are benefits and disadvantages to each of these two approaches. The two-stage, adaptive instantiation and inflation technique required by Claims 11, 24 and 27 achieves substantially all of the benefits of both approaches, while suffering from substantially none of the disadvantages of either approach. The claimed two-stage, adaptive instantiation and inflation technique is not disclosed, taught or suggested in any way by Arning, nor is there any motivation provided in Arning to modify the device disclosed therein to provide such a two-stage, adaptive instantiation and inflation technique.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-42, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,



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